Hawaii's Need

OF

Medical Inspection

IN

Schools

Compulsory Medical Inspection of Schools.

A PLEA FOR THE CHILD.

W. H. Babbitt,
Superintendent of Public Instruction.

Long before the time of Ponce de Leon and his futile search for the phantom fountain of youth, were men endeavoring to find a specific for the ravages of time and a "cure-all" for ailments in old age, many due to neglect in youth. That we have all this time been missing the obviously correct source of a healthy old age as well as a preventive to a premature one may be putting the case too strongly; but the light of scientific investigation shows conclusively that too little attention has been paid to youth in a preparation for maturity, and there is incontrovertible proof that most of the illiteracy, truancy and subsequent crime among the young is directly traceable to known, and oftener unknown, though easily remediable, defects in school children. Physicians and educators in some of our large centers have worked out a plan to overcome these defects in training the child, with results already promising great success and indicating that a path to health in old age, too long neglected, is to be given a fair trial.

"A sound mind in a sound body" has long been a favorite maxim with us but we have given undue emphasis to the sound mind to the lamentable neglect of the body. Many a parent complaining that his child is not being properly educated would be well nigh staggered to know that his own ignorance and neglect have rendered his child physically unable to receive a proper education.

In 1905, there were 300,000 blind people in the United States, many of whom would never have become so had their defects received attention during school life. It cost the public some $15,000,000 to care for them. Evidence collected shows that from twenty to twenty-five per cent. of school children in the country, and about thirty per cent. in the cities, are defective in sight, and approximately five per cent. defective in hearing. In London, out of 8,000 children examined for vision, 60% were found defective; in Minneapolis, out of 25,696, 32% were found defective; in New York, out of 55,332, 29.6%; in Philadelphia, out of 200,000, 28.4%; in Cleveland, out of 30,045,

20.7%. In a small minority of cases were such defects known to parents, teachers, or the children themselves. A local application may not be out of place. Somewhat over a year ago word reached me that a child in one of our city schools had been severely whipped and I was asked to look into the case. The teacher admitted whipping the child for inattentiveness and failure to obey orders. A careful inquiry developed the fact that the child was almost totally deaf in the right ear and that when spoken to from that side she either did not hear at all or so indistinctly as not to comprehend what was said. The condition was unknown to parent, teacher and child. Hawaii has over 18,000 public school children. An examination here would doubtless produce startling results. For the year ending April 30, 1908, the government dispensary gave 4,605 treatments for trachoma to children from only twelve of our public schools in this city. How many private treatments were given, and how many in other places needed treatment, I do not know.

Massachusetts has developed a system for testing sight and hearing, which may be applied by the teachers themselves, and the result of one year's work proved its value. Three hundred and forty-nine towns reported 432,937 children examined, with 96,609 or 22% defective in sight and 27,387, or 6% defective in hearing. Physicians state that teachers properly instructed can discover from 75 to 85 per cent. of cases needing attention. The simplicity and effectiveness of the Massachusetts system commend it for adoption here. Exhibit No. 1 shows this system in detail. The cuts of the boy on Card No. 2 are a fair sample of results which may be reasonably expected where treatment is given. The above tests are ones involving a minimum of time and expense with promise of an unlimited amount of resultant good. Such tests, with arrangements made for furnishing glasses or medical attention at moderate cost to those who could pay, and assistance to those who could not, would remove one great obstacle to the proper development of the child.

The primary object of medical inspection in schools was the detection of infectious and contagious diseases and the exclusion of pupils likely to spread same. An elaborate plan of inspection was adopted in New York City. Children having diphtheria, measles, scarlet fever, chicken pox, whooping cough, mumps, acute catarrhal infection of the nose or throat, pediculosis, contagious eye or skin diseases, were sent home. In the first month, 10,567 children were excluded from school attendance. Realizing at once the seriousness of such a condition, the departments of Health and Education coöperating, adopted a scheme whereby children with minor contagious

diseases, including pediculosis, eye and skin diseases, might remain in school if undergoing persistent and continuous treatment. This was rendered possible and safe through the appointment of school nurses who gave minor treatments at school and visited the homes. As a result 98% of the children who would otherwise have been excluded were enabled to remain without danger of exposing others. New York's general system of records and notifications is indicated on Card No. 2. There is a supervising nurse having general charge of all nurses, who must be trained. A nurse is assigned to a group of schools which she visits each day at a specific time. In a special room or portion of the hall screened off, are referred to her all children suspected by the teacher of needing any attention. Minor treatments may be given by her and directions for home treatment. Careful individual records are kept. Cases showing symptoms of diphtheria, scarlet fever, measles, whooping cough, chicken pox, or mumps, are excluded and the inspector notified. The nurse makes weekly inspection of the eyelids, hair, skin and throat of each pupil. She also visits the homes and shows how to treat and encourages persistent treatment. Medical inspectors, all physicians, visit each school once a day and examine privately:

1st. All children isolated as being suspected of having contagious diseases;
2nd. All children who have been absent from school;
3rd. All children returning after previous exclusion;
4th. All children previously under treatment;
5th. All children referred to them by the school nurse for diagnosis;
6th. All children affected showing no signs of treatment.

The medical inspector gives no treatment whatever but notifies the parents of defects and necessity for treatment and follows up each case to see that treatment is given. The homes of absentees are visited where sickness is suspected. At the beginning of each term the medical inspector examines the eyelids, throat, skin and hair of each pupil but without touching them, as shown by the photograph on card No. 2. In 1905, New York still further elaborated its plan and now makes a complete physical examination of each child, as indicated on the physical record card shown on exhibit No. 2, and the parents are notified of any defects. From March 27th to December 23rd, 1905, 55,332 children were examined and 33,551 cases of treatment found necessary. Their system, however, reduced absenteeism from 65,294 in 1903 to 18,844 in 1905.

Does Hawaii need any such system? The following may be a partial answer. During the last twelve months the following treatments were given at the dispensary for children from only 12 of our city schools: Tonsilitis, 2; asthma, 12; bronchitis, 10; scabies, 18; mumps, 24; eczema, 6; cough, 59; heart trouble, 20; toothache, 25; extraction, 65; boils, 17; styes, 19; earache, 20, and 41 other causes necessitating 658 treatments.

It is today an almost universally admitted fact that backwardness, waywardness, truancy, degeneracy and crime in the young are in a large majority of cases traceable to some physical defect, and that the eradication of such defect tends to change the whole life history of the child. Examples without number might be given. In the Middlesex County Truant School, 61 out of 62 boys were found to have physical defects. In the Disciplinary School of Saginaw, Michigan, every pupil had defect of sight, or hearing, or both. In our own Boys' Industrial School, a medical inspection about a year ago, showed a number of aggravated cases. It is a noteworthy fact that without inspection and correction defects increase rather than decrease during school life, and that many a child leaves school more poorly fitted for life's work than when he entered. Is it not reasonable to believe, with the amount of accumulated evidence from all over the world, that if a proper system of medical inspection were introduced into our Hawaiian Educational system the next generation and succeeding ones would produce better students and better physically equipped citizens, and that any sums expended would be more than compensated for by increased intelligence and greatly lessened tendency to crime?

Much criticism is made of the present day methods of grading children; that the good and bad, the sub-normal and the precocious, are made to mingle indiscriminately because of an age standard of grading. The department of Child Study and Pedagogic Investigation in Chicago has, since 1899, been making an exhaustive study of this subject. It takes up such topics as

1. The physical differences of children in the same room;
2. The physical power of the child during the school day;
3. The educational merits of different courses;
4. The comparative value of full and half day sessions for young children;
5. The backward child and the truant;
6. The ungraded school room.

It makes phycho-physical examinations of children to determine why they are forward or backward, what reasons render

them capable in some subjects and incapable in others, and suggests special schools or special courses for the correction of faults or the proper advancement of the child. Such a department here could render invaluable service. With our children of all nationalities, from all sorts and conditions of homes, with harmful as well as helpful inherited tendencies, with our different climatic conditions and our shifting population, with the unfortunate though unavoidable lack of training along this line of most of our teachers, the advantages of such a department here are self-evident. The development of the child based on his physiological rather than his chronological age is going to have more and more consideration, and no where could such a study be more profitable than here. The relation of mentality to weight, height, strength and puberty is an important one and the proper grading of the child in the future must take this into account. The study, under medical supervision, of the physiological and psychological development of the child might to advantage be introduced into our Normal School and its gradual evolution include all our schools.

The question may fairly be asked, Can Hawaii with its limited funds afford a medical inspection system? The real question is, Can she afford to be without it? Education today has become more and more of a science and teaching more and more of a profession. The taxpayers have a right to expect value received for money expended for educational purposes. If by such a system we can assure more regular attendance at school, thus giving the child the instruction we are paying for, even when he is absent, if by careful watching we can "nip in the bud" epidemics of all kinds, thus reducing quarantine and fumigation expenses, if by lessening the tendency to crime we can reduce expenditures for policing, the amounts expended will be trifling as compared with the savings.

The average cost of instruction per capita in this Territory for the last four years was $23.30, or per day, counting five school days to a week, for the thirty-eight weeks, 16½ cents. For this 16½ cents we expect each child to receive a certain amount of instruction. Whenever a child is absent from school, the Territory spends this money and for it gets no return. If the 4,605 eye treatments at the Dispensary the last year, and one-half of the other treatments, or 530, represent the loss of a school day by the child, this means an expenditure on the part of the Territory of $8,472.72 for instruction which was not given. In January, 1907, the Hanapepe School, with an enrollment of 305, lost 30 school days owing to an epidemic. In March, the Makaweli School, with an enroll-

ment of 109, lost 29 days, and the Waimea School, with an enrollment of 265, thirty-two days, and in February, 1908, with an enrollment of 316, ten days. Thus, 995 children were forced out of school and 101 school days were lost. The Territory paid $3,944.65 for which it received no return. During this time we paid over a thousand dollars in salaries to teachers who, through no fault of their own, were unable to do the work for which they were paid. This represents but three schools and for but a limited period of time.

Our uniform course of instruction is based on the work a normal child can do. If, because of improper seating, defective vision, imperfect hearing, bad condition of nose, throat, teeth, spine, other organic or chronic troubles, a child is unable to do the required work and is compelled to take over one or two years' work, the Territory pays twice or three times the usual amount for the year's work of that child. We have no special schools for the blind, deaf or backward and it therefore behooves us to render our children as physically fit as possible to do the work in the schools we have. Were accurate figures obtainable of all children absent or incapacitated for regular school work, I believe it could be proven that the Territory is spending each year vastly more money for instruction which it is not receiving, than a thorough inspection would cost. It is estimated that from 50 to 75% of parents notified of defects in their children gladly afford means of relief. Our truancy and health laws could doubtless handle nearly all other cases.

At the last session of the Territorial Legislature the following bill was introduced:

"Section 1. The Department of Public Instruction is hereby authorized to appoint a Medical Inspector to hold office during its pleasure and to receive such compensation as the Department may fix. Such appointee shall be a physician duly licensed to practice medicine and surgery within the Territory.

"Section 2. It shall be the duty of the Medical Inspector, under the direction of the Department to visit at least once in every two years each school in the Territory, to examine the children in such schools for the purpose of determining their health and physical condition, to reduce the results of such examination to writing furnishing each child examined with one copy, filing one copy with the teacher in charge of such school and filing one copy with the Department. He shall also advise with and instruct the teachers regarding matters of hygiene and sanitation and as to the proper method of treatment for minor injuries, and when directed by the Department, shall address teachers' meetings on the same or

similar subjects. He shall perform such other duties as the Department may require of him.

"Section 3. No Medical Inspector appointed under the provisions of this Act shall, while holding such office, engage in private practice of his profession, nor shall anything in this act contained authorize or empower such Inspector to prescribe for and treat generally any public school children."

This bill failed to pass and I am inclined to believe for the reason that its provisions were not clearly understood. Somewhat careful investigation has convinced me that a much more thorough system should be outlined; that a number of medical inspectors and nurses should be provided and that the system should be operated under the joint supervision of the Department of Public Instruction and the Territorial Board of Health.

The time is ripe, the conditions unusually favorable, and the amount of money needed insignificant to make this Territory a leader in its educational work. Hawaii claims the most beautiful country in the world; the finest climate; the most scientific development of its sugar industry; leadership in many lines. May it not in the near future rightfully claim the most advanced educational system?

THE NECESSITY FOR THE EXAMINATION OF THE EYES, NOSE, EARS AND THROAT OF SCHOOL CHILDREN.

Wm. C. Rogers, M. D.,
Specialist.

For a number of years, medical men have recognized the necessity of having the physical condition of school children, the best, not only to prevent contagion in the schools, but for what is more important, the most rapid advance possible of the pupils themselves in the various branches of study alloted to them.

In the first place I want to call attention to the importance not only of good eyesight but also to the importance of easy eyesight, in the child who is trying to acquire an education. A great many children have good and apparently perfect eyesight, but on account of eyestrain their faculties are seriously interfered with. Take, for instance, a child with a very small refractive error, while it may be able by a very thorough test, to see both distant and near objects clearly, yet eyestrain and reflex symptoms, from a small error, are much more pronounced in such a case than in one whose error is more pronounced and whose sight may be so defective that it is easily apparent. This may be explained by the fact that in the case of the small error the eyes are constantly trying to overcome this and attain normal vision, while in the case of the greater defect the eyes cannot and therefore do not try to overcome such defect. Perhaps the most common symptoms of eyestrain are frontal headache, smarting and itching irritation of the eyes and sometimes pain in the eyes. The way in which this affects a student's mental concentration is as follows: After a greater or less period of using the eyes the student begins to be aware of this irritation of the eyes, this in turn detracts his mind from his studies so he has to be continually calling it back to the work in hand. This constant effort soon produces a mental exhaustion with the symptoms of headache and drowsiness. In this state it is difficult for the pupil to continue his studies, or if he does, it is impossible for him to learn his lessons properly. Consequently he is pronounced lazy or stupid and a poor student, while if this defect had been corrected he might easily make a good average in his classes.

In the second place we will consider the effect poor hearing would have on the student. It is easy to understand how a child whose hearing of one or both ears is defective would be

handicapped in the class room. His inability to hear what is said creates a misunderstanding and probably calls down punishment that is not merited. While his power of acquiring knowledge out of books may not be interfered with, still he is at a disadvantage in the class by not being able to hear.

In the third place we will consider the effect of nose and throat troubles on school children. Probably every one has seen cases of children who have frequent attacks of what may be called cold or bronchitis or indigestion according to what symptoms predominate at the time. These cases are often a septic infection from the tonsils. They have the symptoms of fever, stupor, difficult and noisy breathing and probably digestive troubles. The tonsils are enlarged and when they are removed are found to be filled with highly poisonous and purulent material. This has produced infection and has been the cause of the frequent attacks of illness. Children who have enlarged tonsils almost always have adenoids obstructing the posterior nasal passages preventing the child from breathing properly through the nose, thus causing what are ordinarily called "mouth breathers." The inability to breath properly through the nose produces congestion about the nasal passages, eustachian tubes to the ears, and the numerous cells between the nose and the brain. Thus the brain is often affected so that the mental faculties are not only dulled, but the child becomes indolent and wayward and may also become weak-minded.

In the above it has been shown that these various defects of the eyes, ears, nose and throat not only have a tendency to produce dull students but also degenerates and criminals. As a matter of fact it has been found that a large percentage of children sent to reform schools, houses of correction and other institutions of that character have some physical defect of these most vital organs, that might, if taken in time, have changed the character of the case entirely. This may be explained by the fact, that study having been made difficult by some physical defect, the pupil looses ambition and rather than face his teacher with illy-prepared lessons, prefers truancy and thus progresses step by step into degeneracy and vicious habits.

The remedy might be divided as follows:

1st. Detection, treatment and prevention of contagious diseases.

2nd. Detection and treatment of eye, ear, nose and throat defects.

3rd. Separating those with incurable mental or physical defects into classes where they will receive more intelligent instruction and not obstruct others who can advance more rapidly.

CARE OF CHILDREN'S TEETH.

J. M. Whitney, M. D., D. D. S.,
Ex-President Dental Society of Hawaii.

Diseases of the teeth have always been regarded as a necessary evil, from which none may hope to escape; one of the minor ills of life, "regrettable but practically unavoidable." When such a view is generally accepted, it is difficult to awaken public sentiment to a realization of its true character, and the need and possibility of relief. For this reason it is a hopeful sign of the times, that in many quarters earnest efforts are being made to instruct parents and teachers concerning the gravity of the results attendant upon dental disease, and to provide for the poor and especially the children of the public schools such free dental supervision and treatment as they may require.

Dr. Paul Gardiner White of Boston, in a recently published pamphlet, makes the astonishing statement that "three-fourths of the highly intelligent well educated people look upon the teeth as able to take care of themselves even in adult life, and that they receive with surprise and incredulity the suggestion that the teeth of children should be carefully cleaned and attended to."

The famous Prof. William Osler of Oxford, England, says, truthfully if rather crudely: "All children should be taught to clean their teeth; all children should have the mouth and teeth inspected, and connected with every school there should be a dental surgeon and he should make a routine inspection of these children and report upon them, and should their teeth be bad or dirty they should be told not to come to school until their teeth are attended to, for a child with bad teeth is a danger in a school."

First: In considering the question of danger to the school we may note that a mouth and teeth uncared for become the best possible place for the extensive and rapid growth of bacteria, from thirty to a hundred different species of which may find lodgment therein. As these are thrown out at every breath, and in many other ways, a school, however well ventilated shortly becomes laden with the health-destroying exhalations, so that teachers and scholars come to have a sense of lassitude which prevents them from doing their best work, and with the less vigorous, compels them to lose time by fre-

quent days at home. This has been clearly proven by experiments in New York City, where careful dental inspection has been given to a school, in which the saving to pupils and teachers has more than paid for the services of the dentist.

Second: As the vitality of the individual is lowered when mouth and teeth have been neglected, it has been noted by careful observers, that when any contagion or epidemic invades a school, it is these unfortunate ones who are first to be overtaken and the last to recover. Similar observations made by an eminent foreign physician called forth the statement that with mouth and teeth properly cared for little danger was to be apprehended from contagious or epidemic diseases.

Third: The ordinary school room contains four volumes of carbon dioxide to every 100 volumes of air. Suppose that among the 40 to 60 children, a half or even a fourth add to the ordinary impurities of each exhalation the poisonous gases of food debris contained in cavities of decay, corrupt breath, caused by inflammation of gums from accumulation of tartar and pus from alveolar abcess, and the oral impurities combine with the air breathed by all the occupants of the room, you have serious conditions that no community which is looking for the best interests of its children can allow to remain.

Fourth: There is nothing in the whole range of human possession so precious to a man as his health, therefore health is first wealth. No people can rest secure which has not regard for the sanitary essentials by which health is safe-guarded. It is recognized by up-to-date physicians as well as dentists that sound teeth are *essential* to the health of the human organism in general. Is it not the work of the schools to teach the best living on all lines? There can be no stronger argument in favor of the thorough examination of the mouth and teeth of school children than the educational benefits to the parents and the whole community by calling attention to the fact that the school is the logical place to begin the study of the physical well being of mankind, a feature of education which is only just beginning to command the attention it deserves.

So recently as October, 1902, Strassburg, Germany, was the first city of note to establish in the public schools a dental clinic under Dr. Ernest Jessen.

In December of the same year Darmstadt established a similar clinic, the expense in each case being municipal. So satisfactory have been the results of this compulsory care of the teeth of school children in these cities, that at the present time more than thirty other cities in Germany have followed the same plan, which is being extended to other continental cities. In England much is being done by the School Dentists'

Society, through the systematic inspection of the teeth of school children.

New York seems to be the only American city in which free dental services for public school children has been provided by the school authorities. In several other American cities, notably in Boston, Rochester, Cleveland, Milton, Pa., and New London, Conn., free dental clinics, not directly connected with the public schools have been provided. Medical inspection, considering the general health of the pupils, the sanitary conditions, the water used and similar items have long been provided, in all the large cities of Europe and America. But a large and most important field of investigation and care has been generally overlooked, one in which only a skilled dentist can serve.

Owing to our peculiar racial and sanitary condition it may be said that there can hardly be a place where such preventive measures as are here indicated are more called for than in our public schools. These suggestions are therefore presented with the hope that some measures may be adopted by the proper authorities, not only to impress upon parents and teachers the importance and need of greater care of the mouth and teeth of their children, but to impress upon the child himself such lessons of care and cleanliness that when he is older, he will not depart from them.

TUBERCULOSIS AMONG SCHOOL CHILDREN IN HONOLULU.

JAMES R. JUDD, M. D.,

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It is estimated that the Great White Plague claims annually 5,000,000 victims and in the United States alone more than 150,000 deaths a year at the average age of 35 are due to this dread disease.

The mortality in Honolulu from tuberculosis is heavy. For the years 1903 to 1907 inclusive there were 759 deaths from this disease divided according to nationality as follows: Chinese, 155; Japanese, 132; Hawaiian, 346; other nationalities, 126. This is an average of 167 deaths per 1000 or 380 deaths per 100,000 population. The United States census report for the year 1900 records 109 deaths from consumption per 1000 deaths or 204 per 100,000 population. A comparison of the above figures shows an excessive mortality for Honolulu.

During childhood and youth everything possible must be done in the schools to favor the development of a sound physique.

A large playground is essential.

In some German cities the shower-bath is a compulsory part of the school curriculum, the children going to their baths in relays during school hours. Shower baths do more than improve the appearance and cleanse the body. They are an excellent stimulant to the nervous system and give tone and vigor to the muscles.

The proper lunch for a school child is a problem. Some families are too poor or too shiftless to provide a wholesome lunch. A lunch at home after school hours would be better than the sodden cakes, dust-covered candy, peanuts and soda water purchased from street vendors.

In an open-air country like Hawaii the problem of ventilation of the school room is readily and successfully met, and in our up-to-date school houses the requirements of cleanliness of the school room are obtained.

In some places on the Mainland there has been inaugurated a "Health Day." One entire day of the school year is given up to instruction in health as it affects the social and industrial position of the individual.

In considering the problem of tuberculosis in its relation

to the schools, effort is not especially needed towards saving school children from this disease as comparatively few contract consumption at the school age of 6 to 12 years, but in the schools there is opportunity for using one of the most, if not the most powerful factor we have towards fighting tuberculosis, that is the power of education. Every case of consumption is contracted from some consumptive, either directly or indirectly, and if every consumptive could be taught how to render himself harmless to his fellow-men, there would soon be a marked decrease in the death roll.

Teachers should have a sufficient knowledge of the subject to be able to impart an understanding of the essentials of the disease to the older children. Instruction should be given as to the cause of the disease which could be explained in such simple language as to be readily understood by the pupils. The method of infection through the dust, contaminated by the sputum of consumptives, should be set forth. Particular attention should be given about spitting, so that a child might know that it is as repulsive to rid himself of his sputum on the floor as of his other excreta. Some children may acquire this knowledge at home, but most children will not learn these things unless at school.

Dr. Knoffs' excellent rules for school children are as follows: Do not spit except in a spitoon, on a piece of cloth, or a handkerchief used for that purpose alone. Never spit on a slate, floor, sidewalk, or playground. Do not wet your fingers in your mouth when turning the leaves of books.

Do not put pencils in your mouth or wet them with your lips.

Do not hold money in your mouth.

Do not swap apple-cores, candy, chewing gum, whistles or anything that is put into the mouth.

Never cough in a person's face. Turn your face to one side and hold a handkerchief before your mouth.

Medical inspection of schools would be of great value in detecting consumption in the early stages and also in detecting conditions predisposing towards consumption. So far as tuberculosis is concerned, the medical inspector with the coöperation of the watchful teacher would detect such conditions as mouth-breathing, swelling of the glands of the neck, persistent coughs, catarrhs, and running ears; pale or feverish, easily fatigued, nervous or fretful children should be carefully examined. Tuberculosis in children manifests itself in bones and joints rather than in the lungs. Joints that are tender and painful on pressure could be detected early. Affections of the vertebral column could be observed before a hopeless case of Potts disease had developed.

The struggle against the Great White Plague is engaging the attention of the civilized world as a world problem. Let us hope that the opportunity to combat tuberculosis through the agency of the school children may not be neglected.

THE QUARANTINE STANDPOINT.

L. E. Cofer, M. D.,
Passed Assistant Surgeon, Chief Quarantine Officer Territory of Hawaii.

In reply to your request for a letter bearing upon the subject of the medical inspection of schools with the view of making an early discovery of contagious diseases possibly present amongst pupils, I have to say that no other sanitary prophylactic measure is as important in municipal quarantine work.

With parents who habitually pay attention to medical as well as to the other needs of their children, medical inspection might possibly be regarded as superfluous, but even such parents are powerless to protect their children against infection from contagious diseases. In other words it is not so much the gross as the hidden danger which justifies the constant medical inspection of school children.

In Philadelphia during the year 1904, 3/9% of the school population were excluded for diphtheria; in 1905 as a result of a more careful medical examination 4/7% were excluded. In 1906, the ratio increased to 1 5/8%.

The scarlet fever exclusion ratio during the same period of three years ranged from 4/7% in 1904 to 1 1/22% in 1906.

The measles ratio ranged from 1 5/14% in 1904 to 12% in 1906.

The chickenpox ratio ranged from 1 2/3% to 2 1/3% during the same period.

In other diseases the ratio showed a similar increase just in proportion as the functions of medical inspection were elaborated. Speaking from the standpoint of a quarantine officer. a medical inspection of schools furnishes an accurate index of the health status of a city, both by districts and by houses individually. In view of the contagious diseases to which Hawaii is constantly exposed, I can think of no place wherein a regular medical inspection of schools is more vitally necessary.

MASSACHUSETTS LAWS.

ACTS OF 1906, CHAPTER 502.

AN ACT RELATIVE TO THE APPOINTMENT OF SCHOOL PHYSICIANS.

Section 1. The school committee of every city and town in the Commonwealth shall appoint one or more school physicians, shall assign one to each public school within its city or town, and shall provide them with all proper facilities for the performance of their duties as prescribed in this act; provided, however, that in cities wherein the board of health is already maintaining or shall hereafter maintain substantially such medical inspection as this act requires, the board of health shall appoint and assign the school physician.

Section 2. Every school physician shall make a prompt examination and diagnosis of all children referred to him as hereinafter provided, and such further examination of teachers, janitors and school buildings as in his opinion the protection of the health of the pupils may require.

Section 3. The school committee shall cause to be referred to a school physician for examination and diagnosis every child returning to school without a certificate from the board of health after absence on account of illness or from unknown cause; and every child in the schools under its jurisdiction who shows signs of being in ill health or of suffering from infectious or contagious disease, unless he is at once excluded from school by the teacher; except that in the case of schools in remote and isolated situations the school committee may make such other arrangements as may best carry out the purposes of this act.

Section 4. The school committee shall cause notice of the disease or defects, if any, from which any child is found to be suffering to be sent to his parent or guardian. Whenever a child shows symptoms of smallpox, scarlet fever, measles, chicken-pox, tuberculosis, diphtheria or influenza, tonsilitis, whooping cough, mumps, scabies or trachoma, he shall be sent home immediately, or as soon as safe and proper conveyance can be found, and the board of health shall at once be notified.

Section 5. The school committee of every city and town shall cause every child in the public schools to be separately and carefully tested and examined at least once in every school

year to ascertain whether he is suffering from defective sight or hearing or from any other disability or defect tending to prevent his receiving the full benefit of his school work, or requiring a modification of the school work in order to prevent injury to the child or to secure the best educational results. The tests of sight and hearing shall be made by teachers. The committee shall cause notice of any defect or disability requiring treatment to be sent to the parent or guardian of the child, and shall require a physical record of each child to be kept in such form as the state board of education shall prescribe.

Section 6. The state board of health shall prescribe the directions for tests of sight and hearing; and the state board of education shall, after consultation with the state board of health, prescribe and furnish to school committees suitable rules of instruction, test-cards, blanks, record books and other useful appliances for carrying out the purposes of this act, and shall provide for pupils in the normal schools instruction and practice in the best methods of testing the sight and hearing of children. The state board of education may expend during the year nineteen hundred and six a sum not greater than fifteen hundred dollars, and annually thereafter a sum not greater than five hundred dollars for the purpose of supplying the material required by this act.

(Amended Sec. 6, Chapter 44, Revised Laws.)

Section 6. A child who has not been vaccinated shall not be admitted to a public school except upon presentation of a certificate signed by a regular practising physician that he is not a fit subject for vaccination. A child who is a member of a household in which a person is ill with smallpox, diphtheria, scarlet fever, measles, or any other infectious or contagious disease, or of a household exposed to such contagion from another household as aforesaid, shall not attend any public school during such illness until the teacher of the school has been furnished with a certificate from the board of health of the city or town, or from the attending physician of such person, stating that danger of conveying such disease by such child has passed.

NEW YORK CITY SCHOOL MEDICAL INSPECTION.

OBJECTS.

1. Repeated and systematic inspection and examination of school children to determine the presence of infectious or contagious disease.
2. Exclusion from school attendance of all children affected with acute contagious disease.
3. Subsequent control of the case, with isolation of the patient and disinfection of the living apartments after termination of the illness.
4. Control and treatment of minor contagious affections, permitting the child to remain in attendance at school.
5. Information of unreported cases of contagious disease, occurring in school children at their homes.
6. Exclusion from school attendance of those children in whose families there exists a contagious disease.
7. Complete physical examination of each school child, for the purpose of determining the existence of non-contagious affections, and advising treatment of same.

FORCE.

1. Assistant Chief Medical Inspector, in charge of work.
2. Corps of Medical Inspectors, all of whom are physicians.
3. Supervising Nurse, in direct charge of the nurses.
4. Corps of Trained Nurses.

WORKING PLAN OF THE SYSTEM.

Duties of Medical Inspectors.

Each Inspector is assigned to duty in a group of schools.

1. Morning Inspection.

Inspector visits each school in his charge before ten o'clock each morning, and examines in a room set apart for this purpose, the following:

(a) All children isolated by the teachers as suspected cases of contagious diseases.
(b) All children who have been absent from school.
(c) Children returning after previous exclusion.
(d) Children previously ordered under treatment.
(e) Children referred by the school nurse for diagnosis.

(f) All affected children showing no evidence of treatment.

Cases to be Excluded.

(a) Children showing signs or symptoms of smallpox, diphtheria, scarlet fever, measles, chicken-pox, whooping cough or mumps.

Cultures are taken in all cases of sore throat to determine the presence of the diphtheria bacillus.

Cases of smallpox, scarlet fever and measles are reported, by telephone, to the Central Office, so that a diagnostician may at once visit the case, confirm the diagnosis and order isolation. In these cases a postal card is sent from the Division of Contagious Diseases to the principal of the school informing him, or her, of the presence of contagious disease, with instructions that no member of the family be allowed to attend school until the termination of the case.

(b) Cases of pediculosis, with live pediculi.

(c) Children affected with contagious eye and skin diseases, and dormant pediculosis, who have persistently refused to undergo treatment.

Cases to be Referred to Their Own Physician, a Dispensary or to the School Nurses for Treatment.

(a) Acute conjunctivitis.

(b) Pediculosis.

(c) Skin Diseases, including ringworm of scalp, face or body, scabies, favus, impetigo and molluscum contagiosum.

These children are re-examined the following day and allowed to attend school as long as treatment is continued. Children affected with trachoma are referred to their own physician or to a dispensary for treatment, and are allowed to attend school as long as evidence of treatment can be shown.